

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-022087**Date Inspected:** 12-Jan-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** An Qing Xiang, Qiu Wen**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Umesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

BAY 14, OBG 13AW (NWIT # 08150)

This QA inspector performed Magnetic Particle Testing (MT) of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA inspector generated MT report for this date. The members are identified as OBG Components. The weld designations reviewed are as follows.

SEG3013AW-049, 050, 032, 045, 046, 040, 039

SEG3013AX-001, 084, 005, 084, 072, 001

SEG3013AT-004, 003

RS3495-002

RS2487-003A/B, 004A/B

This Quality Assurance (QA) Inspector observed the following work in progress:

Bay 14

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### OBG Seg 14W

Repair welding of weld joint no: SEG3020Z-080 [Bottom Plate (BP) 3093A to Longitudinal Diaphragm (LD) 3048A, Complete Joint Penetration (CJP) weld in between Panel Points (PP) 126~126.5]. The welder is identified as 051348 and was observed welding in the 2G position. Welding process was identified as Shielded Metal Arc Welding (SMAW). ZPMC QC was identified as Mr. Sun Tian Liang. The welding variables recorded by this QC appeared to comply with WPS: 345-SMAW-2G(2F)-FCM-Repair. Repair welding was done as per Critical Welding Repair Report (CWR): B-CWR 2653 Rev-1.

Repair welding of weld joint no: SEG3020M-015 [Floor Beam (FB) 3328A to Longitudinal Diaphragm (LD) 3048A, Complete Joint Penetration (CJP) weld at Panel Point (PP) 127]. The welder is identified as 047864 and was observed welding in the 3G position. Welding process was identified as Shielded Metal Arc Welding (SMAW). ZPMC QC was identified as Mr. Sun Tian Liang. The welding variables recorded by this QC appeared to comply with WPS: 345-SMAW-3G(3F)-FCM-Repair. Repair welding was done as per Welding Repair Report (WRR): B-WR 19824 Rev-0.

Repair welding of weld joint no: SEG3020E-044 [Floor Beam (FB) 3343A to Longitudinal Diaphragm (LD) 3048A, Complete Joint Penetration (CJP) weld at Panel Point (PP) 128.3]. The welder is identified as 066398 and was observed welding in the 3G position. Welding process was identified as Shielded Metal Arc Welding (SMAW). ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: 345-SMAW-3G(3F)-FCM-REPAIR. Repair welding was done as per Critical Welding Repair Report (CWR): B-CWR 2735 Rev-0.

Repair welding of weld joint no: SEG3020E-056 [Bottom Plate (BP) 3091A to Floor Beam (FB) 3343A, Complete Joint Penetration (CJP) weld at Panel Points (PP) 128.3]. The welder is identified as 047866 and was observed welding in the 2G position. Welding process was identified as Flux Cored Arc Welding (FCAW). ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by this QC appeared to comply with WPS: 345-FCAW-2G(2F)-ESAB-REPAIR-FCM. Repair welding was done as per Critical Welding Repair Report (CWR): B-CWR 2734 Rev-0.

### OBG Seg 13BW

During random in process inspection this QA inspector observed that the cope hole observed as misaligned from original locations. The parts joining deck panel diaphragm plate of deck panel (DP) 3137 to flange of Floor Beam (FB) 3317 at Panel Point (PP) 122. This issue has been discussed with ZPMC CWI Mr. Qiu Wen and CT lead QA. Mr. Qiu Wen informed this QA that this issue would be corrected in manner comply with contract documents. Attached photograph provide additional details.

### OBG Seg 13AW

ZPMC personnel heat straightening Orthotropic Box Girder (OBG) member identified as the weld joints of segment 13AW joining K Plate (KP) 3015A to Floor Beam (FB) 3194A at Panel Point (PP) 119.65. Distortion appeared to be caused by welding of the material. ZPMC Quality Control (QC) inspector identified as Mr. Liu Fang was present to monitor the heat straightening process. The heat straightening appeared to comply with Heat Straightening Report (HSR) number 10061. Attached photograph provides additional details.

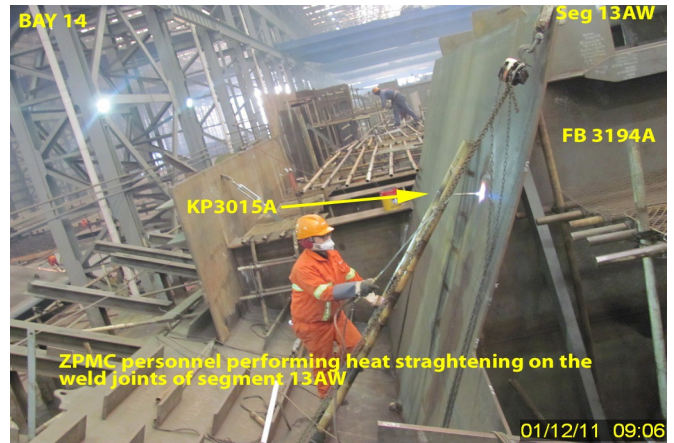
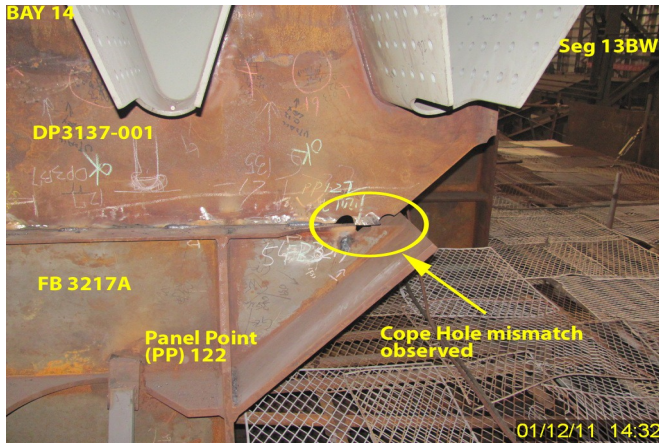
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Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



## Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang : 15000422372, who represents the Office of Structural Materials for your project.

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**Inspected By:** Gaikwad,Umesh

Quality Assurance Inspector

**Reviewed By:** Patterson,Rodney

QA Reviewer

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